

Abstract of the Disclosure

In a method for determining the degree of charge-up induced by plasma used for manufacturing a semiconductor device and an apparatus therefor, a predetermined region on a surface of a wafer on which a plasma process has been performed is repeatedly scanned with a primary electron beam. Secondary electrons generated by a reaction between the primary electron beam and the surface of the wafer that are emitted to the outside of the surface of the wafer are collected. The degree of charge-up induced at the surface of the wafer by the plasma used during the plasma process is determined from the change in the amount of collected secondary electrons. Determination as to whether a contact hole is opened or as to the degree of degradation of a gate insulating layer is made based on the degree of charge-up.